

ECOSYSTEM INDICATORS

Environmental indicators are specific, measurable markers that help assess the condition of the environment and how it changes over time. Both sharp changes and general trends in the values of those markers can indicate improved or worsening environmental health. The LISS has developed a series of indicators to answer the following questions:

1 Are the Waters and Sediments Getting Cleaner?

Hypoxia

- Dissolved Oxygen Levels
- Biological Nutrient Removal (BNR)
- Point Source Nitrogen Loads
- Chlorophyll-a Levels

Toxic Contaminants

- End-of-Pipe Toxicity
- Industrial Chemical Discharges
- Contaminant Trends in Mussels
- Contaminants in Sediments

Pathogens

- Beach Closure Days

2 Are Fish and Wildlife Populations More Abundant?

Shellfish

- Oyster Harvest
- Lobster Landings

Finfish

- Bluefish, Winter Flounder, and Tautog Abundance

Coastal Birds

- Osprey Nesting Adults
- Plover and Least Tern Populations

3 Are Fish and Wildlife Habitats Being Protected and Restored?

- Miles of Stream Accessible to Anadromous Fish
- Acres of Tidal Wetlands Restored
- Acres of Inland Wetlands

4 How is the Landscape Changing Due to Human Activities?

- Forest Cover
- Watershed Population Levels

SOME FACTS ABOUT LONG ISLAND SOUND

- Long Island Sound is an estuary, a place where salt water and fresh water mix. Unlike other estuaries, it's open at both ends - through The Race to the Atlantic Ocean at the eastern end and through the East River and New York Harbor at the western end.
- Salt water flows into the Sound from the Atlantic Ocean. Approximately 90 percent of its freshwater comes from three major rivers in Connecticut: the Thames, the Housatonic, and the Connecticut.
- Long Island Sound's east-west orientation makes it unusual among estuaries. Most large estuaries in the North Atlantic are oriented north-south.
- It is bounded by the state of Connecticut and Westchester County, New York, on the north and by Long Island on the south. Long Island Sound is 110 miles long (east to west) and about 21 miles across at its widest point, with mid-Sound depths between 60 and 120 feet.
- The average depth of the Sound is a shallow 65 feet. If dropped into the Sound at this depth, the Statue of Liberty would still have 86 feet exposed above the water, and that's without its 150-foot granite base.
- Long Island Sound has a water surface of 1,268 square miles and a volume of 2.19 trillion cubic feet, which is about 67 billion tons or 18 trillion gallons of water.
- The Sound's watershed, which is all the land from which water drains into the Sound, extends into Canada, and covers an area of about 16,000 square miles. About 11,000 square miles (71 percent) of the watershed is in the drainage basin of the Connecticut River.
- The Long Island Sound watershed is inhabited by more than 8 million people. Any pollutants entering the water as a result of human activities in the watershed can ultimately harm Long Island Sound.
- The 82 sewage treatment plants in Connecticut and 23 in New York that discharge into the Sound or its tributaries contribute more than a billion gallons of treated effluent each day.

